Title (en)

THREE-WHEELED ELECTRIC VEHICLE ACCORDING TO THE EU VEHICLE CLASS L2E-U

Title (de)

DREIRÄDRIGES ELEKTROFAHRZEUG NACH EG-FAHRZEUGKLASSE L2E-U

Title (fr)

VÉHICULE ÉLECTRIQUE À TROIS ROUES SELON LA CLASSE DE VÉHICULE L2E-U DE L'UE

Publication

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Application

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Abstract (en)

[origin: WO2020221474A2] The invention relates to a three-wheeled electric vehicle according to the EU vehicle class L2e-U which has two rear wheels (100 and 100') which are driven electromotively and are each driven by a wheel hub motor which is embodied as a multi-phase synchronous motor with an integrated motor controller and is configured for a maximum continuous rated power of greater than 2 kW and less than 6 kW, in particular for a maximum continuous rated power of approximately 4 kW. A telescopic spring fork (80) is pivotably coupled to the front end of the vehicle bodywork (3) and is capable of executing, with respect to the longitudinal direction of the vehicle, a maximum steering angle lock of approximately minus 80° up to approximately plus 80°, which is sensed by a steering angle sensor which generates a corresponding steering angle signal. In addition, a controller which is equipped with a data storage capacity and digital data processing capacity and which actuates the two motor controllers in such a way that when cornering occurs the two drive wheels (100 and 100') are each operated with a different torque is mounted on the vehicle (2). For example, the controller can bring about a starting and obstacle-overcoming mode which is executed at a vehicle speed of 0 to 2 km/h, wherein, at a large steering angle lock of up to 80°, the motor which is mounted on the wheel on the outside of the bend supplies approximately 90% of the total torque which is requested with the given acceleration rotational engagement position and the motor which is mounted on the wheel on the inside of the bend supplies approximately 10% of the total requested torque, that is to say a torque ratio of 90 to 10 is set. When there is a smaller steering lock, a proportionally correspondingly reduced torque ratio is set until such a torque ratio of 50 to 50 is reached for straight ahead travel.

IPC 8 full level

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